# III. SUMMARY OF INTERPRETIVE THEMES

The 1987 State Parks Act defines the purposes of the state parks system. It establishes that:

> *The state of North Carolina offers unique archaeologic, geologic, biologic, scenic and recreation resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.*

It further provides that:

> *Park lands are to be used by the people of this State and their visitors in order to promote understanding of and pride in the natural heritage of this State.*

One of the best methods of meeting these purposes is through environmental education. The definition of environmental education as set forth in *The North Carolina Environmental Education Plan* is given below.

> *Environmental education is an active process that increases awareness, knowledge and skills that result in understanding, commitment, informed decisions and constructive action to ensure stewardship of all interdependent parts of the earth's environment.*

According to the state plan, environmental education activities should include humans and their interactions with natural systems as part of the exercise, not taught as separate components. Gorges State Park is an excellent place to observe human impacts on a landscape over time. Much of the park was logged in the early 1900s. The 1916 flood on the Toxaway River, which occurred when an earthen dam failed, provides a spectacular example of what can happen when humans alter hydrology.

The park's interrelated, primary interpretive themes revolve around geomorphology, hydrology and biodiversity. An overarching theme may be stated: Due to its steep topography, abundant surface waters and warm, wet climate, the park supports a great variety of natural communities with many unusual or rare species. A future visitor's center will help park users understand how the unique geology, topography, hydrology and climate together provide the conditions necessary for the amazing biodiversity seen in the park. Interpretive programs and displays will also highlight resource management practices that allow this biodiversity to flourish now and for years to come.

## PRIMARY INTERPRETIVE THEMES

### The Steep Terrain of the Blue Ridge Escarpment

Gorges State Park lies within the Blue Ridge Escarpment, a wide strip of steep, highly dissected land that drops sharply from the eastern edge of the Blue Ridge Mountains to the adjoining Piedmont

lowlands. In the park, the escarpment falls from its highest elevation of 3,200 feet to its lowest elevation of 1,200 feet in a distance of only four miles! The escarpment includes many striking landforms such as large overhangs, cliffs, pavement outcrops, cascades and waterfalls. The park is an ideal place to study geology in that it straddles two major geologic provinces separated by the Brevard Fault Zone. An active quarry is also located very near the park. The landforms and soils that result from the underlying bedrock support a variety of natural communities and many rare species.

### Wet Climate and Abundant Surface Waters

The park is a very wet place, receiving an average of 80 to 90 inches of rainfall each year. These rains supply the abundant surface waters, which are the main source of weathering and erosion in the park and throughout the Blue Ridge Escarpment. The escarpment has the highest concentration of waterfalls and spray cliffs in eastern North America. The wet gorges and spray cliffs host an amazing diversity of amphibians and tropical plants. Periods of intense rainfall, such as from tropical storms and hurricanes, often cause debris flows down the steep slopes. Human disturbance via construction of dams, roads, homes and businesses has altered the hydrology of the region, sometimes with disastrous consequences, such as the flood of 1916. Hydropower projects can also be seen in the vicinity of the park.

### Natural Communities and Rare Species

Because it is located in the transition zone between the Piedmont and mountains, the Blue Ridge Escarpment is a refuge for a diverse assortment of species and natural community types. The steep elevation gradient in the park creates differences in hydrology, soils and climate over very short distances, allowing for an ever-changing mosaic of natural communities. Unexpected combinations of Piedmont and mountain species occur, and of the 114 natural community types found in North Carolina, 16 have been documented in the park. These community types range from high-elevation hardwood forests to low-elevation cove forests, and include communities associated with waterfalls and spray cliffs. The deep river gorges harbor an array of disjunct, or isolated species that are tropical in origin. As a result, biologists refer to the escarpment as “the tropics in the mountains.”

## SECONDARY INTERPRETIVE THEMES

-Cultural History of Area
-History of Development of Gorges State Park
-Safety Concerns (waterfalls, landslides, etc.)
-Wilderness Ethics and Behavior (leave no trace)
-Astronomy (proposed Visitor Center site)
-Park’s Flora not covered in the EELE (trees, medicinal plants, spring/fall wildflowers)
-Rare/Significant Mammals of the park (bears)
-Rare/Significant Birds (neo-tropical and resident) of the park
-Rare Significant Fish of the park
-Rare/Significant Reptiles and Amphibians of the park (rattlesnake and salamanders)

-Rare/Significant Insects of the park
-Aquatic Macro/Micro Invertebrates (stream studies)
-Non-native plants and animals